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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 6

Complete if Known	
Application Number	09/723,722
Filing Date	November 28, 2000
First Named Inventor	John P. Anderson
Art Unit	1636
Examiner Name	Celine X. Qian
Attorney Docket Number	015270-006441US

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U.S. PATENT DOCUMENTS

Examiner	Cite No.[1]	Document Number: Number Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	6,361,975	03-26-2002	Christie, et al.	
	2	6,358,725	03-19-2002	Christie, et al.	
	3	6,319,489	11-20-2001	Powell, et al.	
	4	6,319,689	11-20-2001	Powell, et al.	
	5	6,313,268	11-06-2001	Hook	
	6	6,245,884	06-12-2001	Hook	
	7	6,245,964	06-12-2001	McConlogue, et al.	
	8	6,221,645	04-24-2001	Chrysler, et al.	
	9	6,211,428	04-03-2001	Singh, et al.	
	10	6,162,630	12-19-2000	Powell, et al.	
	11	6,025,180	02-15-2000	Powell, et al.	
	12	5,942,400	08-24-1999	Anderson, et al.	
	13	5,877,015	03-02-1999	Hardy, et al.	
	14	5,849,560	12-15-1998	Abraham	
	15	5,837,672	11-17-1998	Schenk, et al.	
	16	5,795,963	08-18-1998	Mullan	
	17	5,766,846	06-16-1998	Schlossmacher, et al.	
	18	5,750,349	05-12-1998	Suzuki, et al.	
	19	5,744,346	04-28-1998	Chrysler, et al.	
	20	5,733,768	03-31-1998	Dixon, et al.	
	21	5,593,846	01-14-1997	Schenk, et al.	
	22	5,455,169	10-03-1995	Mullan	
	23	5,424,205	06-13-1995	Dovey, et al.	
	~~112~~	~~09/869,414~~		~~Gurney, et al.~~	
	~~90~~	~~09/794,927~~		~~Gurney, et al.~~	
	~~91~~	~~09/794,925~~		~~Gurney, et al.~~	

Examiner Signature		Date Considered	Feb. 11, 04

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	89	09/795,847	NA	Gurney, et al.	
	92	09/794,748		Gurney, et al.	
	88	09/794,743		Gurney, et al.	
	111	09/681,442		Gurney, et al.	
	87	09/551,853		Gurney, et al.	
	96	09/548,376		Gurney, et al.	
	24	09/548,373		Gurney, et al.	
	99	09/548,372		Gurney, et al.	
	94	09/548,370		Gurney, et al.	
	97	09/548,369		Gurney, et al.	
	100	09/548,368		Gurney, et al.	
	98	09/548,367		Gurney, et al.	
	25	09/548,366		Gurney, et al.	
	95	09/548,365		Gurney, et al	
	26	09/416,901		Gurney, et al.	
	27	09/404,133		Gurney, et al	
	28	09/277,229		Citron, et al.	
	29	60/210,292		Hong, et al.	
	30	60/178,368		Lin, et al.	
	31	60/177,836		Lin, et al.	
	32	60/168,060		Lin, et al.	
	33	60/155,493		Gurney, et al.	
	34	60/141,363		Lin, et al.	
	35	60/139,172		Anderson, et al.	
	36	60/119,571		Basi, et al.	
	37	60/114,408		Basi, et al.	
	38	60/101,594		Gurney, et al.	

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Sheet 3 of 6

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Attorney Docket Number	015270-006441US

FOREIGN PATENT DOCUMENTS

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	39	EP	EP 0 855 444	A2	07-29-1998			
	40	EP	EP 0 848 062	A2	06-17-1998			
	48	PCT	WO 01/38487	A2	05-31-2001			
	49	PCT	WO 01/36600	A1	05-25-2001			
	50	PCT	WO 01/31054	A1	05-03-2001			
	51	PCT	WO 01/29563	A1	04-26-2001			
	52	PCT	WO 01/00665	A2	01-04-2001			
	53	PCT	WO 01/00663	A2	01-04-2001			
	47	PCT	WO 00/69262	A1	11-23-2000			
	46	PCT	WO 00/68266	A1	11-16-2000			
	45	PCT	WO 00/58479	A1	10-05-2000			
	44	PCT	WO 00/56871	A2	09-28-2000			
	43	PCT	WO 00/47618	A3	08-17-2000			
	42	PCT	WO 00/23576	A2	04-27-2000			
	41	PCT	WO 00/17369	A2	03-30-2000			
	54	PCT	WO 99/64587	A1	12-16-1999			
	55	PCT	WO 99/46281	A2	09-16-1999			
	57	PCT	WO 99/34004	A2	08-07-1999			
	59	PCT	WO 99/31236	A2	06-24-1999			
	60	PCT	WO 98/26059		06-18-1998			
	61	PCT	WO 98/21589		05-22-1998			
	62	PCT	WO 98/13488		04-02-1998			
	63	PCT	WO 98/11236		03-19-1998			
	103	PCT	WO 97/47314		12-18-1997			
	56	PCT	WO 96/40885	A2	12-19-1996			
	58	PCT	WO 96/31122	A1	10-10-1996			
	102	PCT	WO 96/20725	A2	07-11-1996			

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Sheet 4 of 6

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Application Number	09/723,722
Filing Date	November 28, 2000
First Named Inventor	John P. Anderson
Art Unit	1636
Examiner Name	Celine Qian
Attorney Docket Number	015270-008441US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	104	Baldwin, et al., Crystal structures of native and inhibited forms of human cathepsin D: Implications for lysosomal targeting and drug design, *PNAS USA*, 90:6796-6800 (1993).	
	105	Brown, et al., Evaluation of Cathepsins D and G and EC 3.4.24.15 as Candidate β-Secretase Proteases Using Peptide and Amyloid Precursor Protein Substrates, *Journal of Neurochemistry*, 66: 2436-2445 (1996).	
	106	Chevallier, et al., Cathepsin D displays in vitro β-secretase-like specificity, *Brain Research*, 750:11-19 (1997).	
	64	Chyung, et al. Novel β-Secretase Cleavage of β-Amyloid Precursor Protein in the Endoplasmic Reticulum/Intermediate Compartment of NT2N Cells, *Journal of Cell Biology*, 138: 671-680 (August 11, 1997).	
	107	Diedrich, et al., Nucleotide sequence of a cDNA encoding mouse cathepsin D, *Nucleic Acids Research*, 18:7184 (1990).	
	65	Elan Corporation, plc and Pharmacia Corporation announce research collaboration, News 08/09/2000, www.elancorp.com.	
	66	Evin, et al., Alzheimer's disease amyloid precursor protein (βAPP): proteolytic processing, secretases and βA4 amyloid production, *Amyloid; Int. J. Exp. Clin. Invest.* 1: 263-280 (September 8, 1994).	
	67	Haass, et al., Amyloid β-peptide is Produced by Cultured Cells During Normal Metabolism, *Nature*, 359: 322-325 (September 24, 1992).	
	68	Haass, et al., The Swedish Mutation Causes Early-Onset Alzheimer's Disease by β-Secretase Cleavage Within the Secretory Pathway, *Nature Medicine*, 12: 1291-1296 (December 1995).	
	69	Haass, et al., β-Amyloid Peptide and 3-kDa Fragment are Derived by Distinct Cellular Mechanisms, *Journal of Biochemistry*, 268: 3021-3024 (February 15, 1993).	
	70	Hirosawa, et al., Characterization of cDNA Clones Selected by the GeneMark Analysis from Size-Fractionated cDNA Libraries From Human Brain, *DNA Res.*, 6(5): 329-336 (October 29, 1999).	

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Sheet 5 of 6

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Art Unit	1636
Examiner Name	Celine Qian
Attorney Docket Number	015270-008441US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
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	71	Hussain, et al., Identification of a Novel Aspartic Protease (Asp 2) as β-Secretase, *Molecular and Cellular Neuroscience*, 14: 419-427 (1999).	
	72	Kang, et al., The Precursor of Alzheimer's Disease Amyloid A4 Protein Resembles a Cell-Surface Receptor, *Nature*, 325: 733-736 (February 19, 1987).	
	73	Kitaguchi, et al., Novel Precursor of Alzheimer's Disease Amyloid Protein Shows Protease Inhibitory Activity, *Nature*, 331: 530-532 (February 11, 1988).	
	74	Knops, et al., Cell-type and Amyloid Precursor Protein-type Specific Inhibition of Aβ Release by Bafilomycin A1, a Selective Inhibitor of Vacuolar ATPases, *Journal of Biological Chemistry*, 270: 2419-2422 (February 10, 1995).	
	75	Koo and Squazzo, Evidence that Production and Release of Amyloid β-Protein Involves the Endocytic Pathway, *Journal of Biological Chemistry*, 269: 17388-17389 (July 1, 1994).	
	108	Majer, et al., Structure-based subsite specificity mapping of human cathepsin D using statine-based inhibitors, *Protein Science*, 6:1458-1466 (1997).	
	76	Mullan, et al., A Pathogenic Mutation for Probable Alzheimer's Disease in the APP Gene at the N-Terminus of β-Amyloid, *Nature Genetics* 1: 345-347, (August 1992).	
	77	PCT Search report for PCT/US99/20881	
	78	PCT Search report for PCT/US00/03819	
	79	Ponte, et al., A New A4 Amyloid mRNA Contains a Domain Homologous to Serine Proteinase Inhibitors, *Nature*, 331: 525-527 (February 11, 1988).	
	109	Saftig, et al., Amyloidogenic Processing of Human Amyloid Precursor Protein in Hippocampal Neurons Devoid of Cathepsin D, *Journal of Biological Chemistry*, 271:27241-27244 (1996).	
	110	Schechter, et al., On the size of the active site in proteases. I. Papain, *Biochemical and Biophysical Research Communications*, 27:157-162 (1967).	

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dw	80	Seubert, et al. Secretion of β-amyloid Precursor Protein Cleaved at the Amino Terminus of the β-amyloid Peptide, *Nature*, 361: 260-263 (January 21, 1993).	
dw	81	Sinha, et al., Purification and Cloning of Amyloid Precursor Protein β-Secretase from Human Brain, *Nature*, 402: 537-540 (December, 2 1999).	
dw	82	Szecsi, The Aspartic Proteases, *Scand. J. Clin. Lab. Invest.*, 52 (suppl. 210): 5-22 (1992).	
dw	83	Tanzi, et al., Protease Inhibitor Domain Encoded by an Amyloid Protein Precursor mRNA Associated with Alzheimer's Disease, *Nature*, 331: 528-530 (February 11, 1988).	
dw	93	Thompson, et al., Expression and characterization of human β-secretase candidates metalloendopeptidase MP78 and cathepsin D in βAPP-overexpressing cells, *Molecular Brain Research*, 48:208-214. no year	
dw	84	Vasser, et al., β-secretase Cleavage of Alzheimer's Amyloid Precursor Protein by the Transmembrane Aspartic Protease BACE, *Science*, 286 (5440): 735-41 (October 22, 1999).	
dw	85	Yan, et al., Membrane-anchored Aspartyl Protease with Alzheimer's Disease β-Secretase Activity, *Nature*, 402: 533-537 (December 2, 1999).	
dw	101	Young, et al., HIV-1 Protease Inhibitors Based on Hydroxyethylene Dipeptide Isosteres: An Investigation into the Role of the P_1-Side Chain on Structure-Activity, *J. Med. Chem.*, 35:1702-1709 (1992).	
dw	86	Zhao, et al., β-Secretase Processing of the β-Amyloid Precursor Protein in Transgenic Mice is Efficient in Neurons but Inefficient in Astrocytes, *Journal of Biological Chemistry*, 271: 31407-31411 (December 6, 1996).	

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